UNERTL RIFLE

Focusing and Use Instructions General Information

TELESCOPES

J. UNERTL OPT. CO.

In order that the user obtains the maximum efficiency and satisfaction from his target telescope, he must make three adjustments. These are adjustments of ocular focus, parallax setting and mount adjustment.

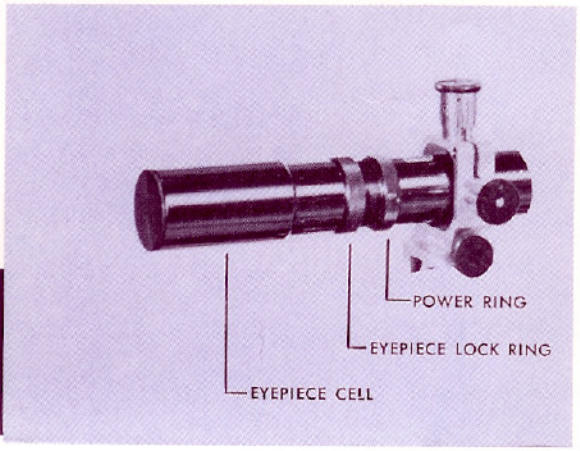
The ocular focus position need only be done once and no change is required unless the vision of the user changes. However, parallax setting and mount adjustments must be made for optimum performance of the telescope at a specific range.

Since the adjustment for parallax is very important, it is imperative that when making a critical check that the scope be supported vibration free. It can be supported in a tripod or if mounted on a rifle, so supported by a rest or sandbag so as to be vibration free.

Parallax is the apparent movement of the reticule on the field of view or target when viewed from various positions of the eyepiece and is the result of improper focusing. By changing the eye position vertically or horizontally a small amount, if parallax is present, the reticule will appear to change position on the target. Properly set, the relative position remains fixed irrespective of eye position. Setting for parallax is accomplished by an objective focusing system of the telescope.

Adjustment of Ocular—1) Point the telescope at a distant scene or to sky and drape a white handkerchief over the objective end of the telescope.

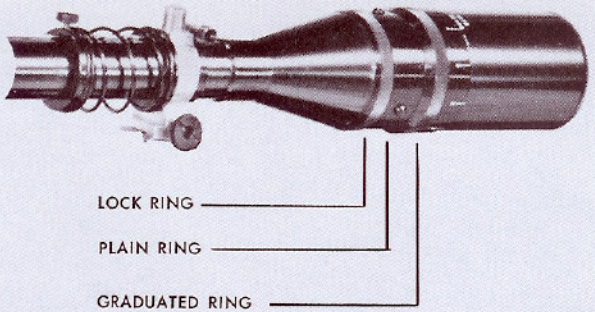
2) Look at a distant scene with unaided eye for several seconds and quickly glance into ocular of telescope. If properly focused, the crosswires should appear instantly distinct and sharp. If such is not the case, ocular lens requires focusing. It is suggested that the eyepiece cell be unscrewed about ¼" from the original position and advanced inward about 2 to 3 turns at a time, until the position is such that the reticule is immediately distinct to the eye.

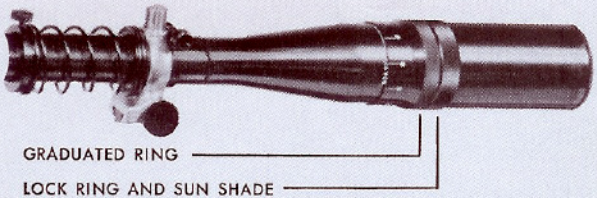


3) Once correct position is found, turn knurled eyepiece lock ring until it butts against eyepiece cell and tighten.

4) **Do not change position of eyepiece cell once it is properly focused on the reticule as this is not a parallax adjustment.**

5) If crosswire is not plumb, loosen the two small screws in the power ring and rotate as required, then retighten.





Parallax and Range Setting

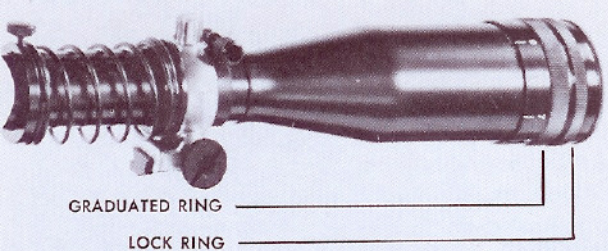
Models—2″ Target, 1½″ Target, 2″ Ultra Varmint (Calibrated Head)

1) Loosen lock ring one or two turns.
2) Rotate graduated ring to desired range setting.
3) Rotate locking ring to drive plain ring until it is tight against graduated ring.

Note—In going to longer range settings, the lock ring must be backed off sufficiently so that the graduated ring can drive the plain ring until the graduated ring registers on the proper setting. Lock ring is then tightened as before. The three screws in the plain ring engage the internal objective cell through slots. They require no adjustment and if tightened excessively can lock the entire focusing assembly.

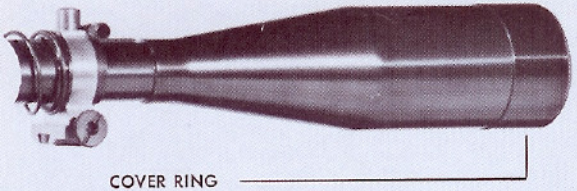
Models—1¼″ Target, 1″ Target

1) Loosen lock ring one or two turns.
2) Rotate graduated ring to desired range setting.
3) Hold graduated ring in fixed position relative to scale and tighten lock ring.



Models—1¼" Varmint and Vulture

Focusing procedure same as above. Normally the user of the Varmint or Vulture scope will set it for field use so that it is parallax free for 150 yards. The resultant parallax when using the scope at shorter (to about 100 yards) and longer ranges is negligible.



Models—Plain Head Ultra Varmint and Plain Head 1¼" Varmint

1) Unscrew cover ring.
2) After removed, this exposes a narrow ring which engages the lens cell. By rotating ring and keeping it against the end of cell, the internal cell carrying the objectives moves axially.
3) Adjust as required until scope is parallax free, replace cover ring and lock.

Mount Adjustments

The following adjustment on the mount will change the **point of impact** as follows:

Elevation

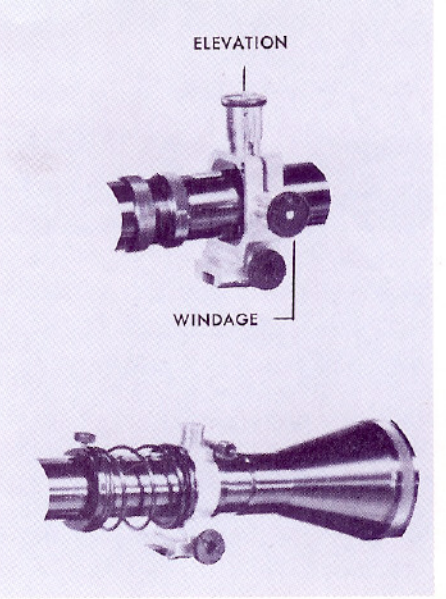
Turning knob clockwise—shifts downward
Turning knob counter clockwise—shifts upwards

Windage

Turning knob clockwise—shifts to left
Turning knob counter clockwise—shifts to right

Cleaning

Lens surfaces should be cleaned with a soft cloth. If extremely dirty, use a cloth moistened with water and detergent. Avoid the use of solvents such as alcohol.



Recoil Spring Adjustment

Recoil spring should be compressed only sufficiently to return scope to original position. On .22 calibre rifle this will be about ½ the normal free length. Big bore rifles require **less tension** as the recoil drives the scope forward a much greater distance.

Focusing Readings for Unertl Rifle Telescopes

The following factory settings are only meant to give the mean position and a departure of several divisions from the suggested settings may be necessary. The user should critically test his scope at each range and note any correction required. The turns and divisions refer to the graduated ring relative to the 200 yard reference line on the objective cell.

	2" TARGET & ULTRA VARMINT		1½" TARGET		1¼" TARGET		1" TARGET		1¼" VARMINT	
DISTANCE	TURNS	DIV.	TURNS	DIV.	TURNS	DIV.	TURNS	DIV.	TURNS	DIV.
200 YDS	0	0	0	0	0	0	0	0	0	0
100 YDS	1	0	1	2	0	9	0	7	0	3
50 YDS	3	0	3	0	2	3	1	2	1	2
25 YDS	6	6	7	0	5	0	2	5	2	6
50 FT	10	6	10	8	8	0	3	9	4	0

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